

## Abstract

The invention relates to a method for determining and controlling the material flow of continuous-cast slabs, in particular steel slabs, by monitoring and optimizing the temperature on their transport path between the continuous-casting installation and the rolling mill. In this method, to determine the amount of heat and the temperature profile of the slab, starting from the known temperature of the liquid phase at the mold exit of the continuous-casting installation and given knowledge of the physical parameters of the slab, the convective mixing of the amount of heat contained in the slab and the time-dependent heat loss from the inhomogeneously cooling slab to the surrounding medium are calculated by means of a mathematical-physical model, and the result of the calculation, if appropriate together with the measured surface temperature of the slab, is used to control the material flow in an existing slab-monitoring system.